

REMARKS

This Amendment is in response to the Office Action mailed June 23, 2004 (hereinafter, "the Action"). A one-month extension of time is being submitted herewith to extend the period for response to October 23, 2004. The specification is under objection and all pending claims (1-21) stand rejected under 35 U.S.C. § 102(e).

By this Amendment, the specification is amended to include the application number of the related application in the "Background Art" section. Formal drawings are supplied under a separate letter to the draftsman. Finally, the claims are amended to improve consistency in terminology with the application and to more clearly set forth the novel aspects of the invention. Upon entry of this Amendment, claims 1-6, 8-13, and 15-20 remain pending. No new matter has been introduced.

Disclosure

The disclosure is under objection for leaving a blank application number for a co-pending application in the second paragraph in the "Background Art" section. By this Amendment, the blank application number is replaced with the Application number 09/764,771. Applicant respectfully submits that the grounds for objection have been overcome and therefore requests that the objection to the disclosure be withdrawn.

Drawings

Applicant submits herewith, under a separate letter to the draftsman, formalized drawings. No substantive changes were made to the drawings.

Claims

Claims 1-21 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,363,411 issued to Dugan et al. (hereinafter, "Dugan"). Applicant respectfully traverses because the cited reference does not disclose each and every element set forth in the claims.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP 2131.01. To overcome such a rejection, it logically follows that Applicant needs only show

IN THE DRAWINGS

Amendment to the Drawings:

A separate letter to the Draftsperson is being submitted herewith with formalized drawings. No substantive changes have been made to the drawings.

one element in the claim that distinguishes the invention from the prior art. The following should therefore not be construed as an exhaustive list of all differences between the prior art and the claimed invention as such a showing is unnecessary to overcome the rejection.

The presently claimed invention relates to a method, system, and software for managing resources and distributing these resources among a plurality of processes. Dugan is not concerned with a distribution of resources among processes. Instead, Dugan discloses a communication network that provides communication services, e.g., telephony, data, etc., to a plurality of consumers using an intelligent switching network. (See, e.g. Abstract, col. 3, lines 35-47 or col. 1, lines 25-33.) The system disclosed by Dugan allows the service provider to develop new services using a Managed Object Creating Environment (MOCE) (col. 12, lines 44-46 and 51-61). In general, managed objects are a method of packaging software functions wherein each managed object offers both functional and management interfaces to implement the functions of the managed object (col. 31, lines 25-28). The managed objects define the service and allows for simpler changes and enhancements to the service than previous methods which required hardware switch upgrades (see, e.g., col. 12, lines 58-64). General purpose computers, referred to as “intelligent switch processors” or “IPC” are used instead of dedicated switches to provide the service (col. 10, lines 46-58).

Claim 1 specifically sets forth that the active computing environment is encapsulated “into a compute capsule, the compute capsule comprising a plurality of processes and their associated system environment.” Support for this element is provided, e.g., on page 6, line 4 and page 10, lines 8-9 in the specification. An active computing environment is defined on page 6, lines 3-4 of the present application, as comprising “one or more processes and the complete state necessary for the execution of those processes.” A process is a well-understood concept in computer science and is generally defined as a running instance of a program, including all variables and other states. For example, The Free On-line Dictionary of Computing, <http://www.foldoc.org/>, Editor Denis Howe, defines “process” as “The sequence of states of an executing program. A process consists of the program code . . . private data, and the state of the processor, particularly the values in its registers. It may have other associated resources such as a process identifier, open files, CPU time limits, shared memory, child processes, and signal handlers.”

In contrast, Dugan “encapsulates,” into an object, only functions and properties to define a service. (See, e.g., Abstract, lines 5-9.) The functions and properties forming the computer objects are merely computer code and defined variables, and are not “processes” as

understood in the art of computer science. Dugan does not disclose or suggest encapsulating an active computing environment comprising one or more processes and the complete state necessary for the execution of those processes. Therefore, because Dugan does not disclose “encapsulating an active computing environment” as set forth in claims 1-5, Applicant respectfully submits that claim 1 and its dependent claims 2-5 are allowable over Dugan.

Claim 8 sets forth a system for managing computer resources that comprises “a compute capsule, the compute capsule comprising a plurality of processes and their associated system environment.” As mentioned above, Dugan does not disclose a compute capsule and the managed objects Dugan discloses do not contain processes, but instead only functions and properties. Therefore, Applicant respectfully submits that claim 8 should be allowed. Furthermore, claims 9-13 depend from claim 8 and should therefore be allowed for the same reasons as claim 8.

Similarly, claim 15 sets forth a computer program product comprising a computer usable medium having computer readable program code configured to cause the computer to encapsulate an active computing environment into a compute capsule comprising a plurality of processes and their associated system environment. As mentioned above, Dugan does not disclose a compute capsule and the managed objects that Dugan does disclose do not contain processes, but instead only functions and properties. Therefore, Applicant respectfully submits that claim 15 should be allowed. Furthermore, claims 16-20 depend from claim 15 and should be allowed for the same reasons as claim 15.

Each independent claim 1, 8, and 15, in addition to setting forth a compute capsule comprising a plurality of processes and their associated system environment, also sets forth promoting the compute capsule to a first class object status. The term, “first class object” is a term of art well understood in the field of computer science. In addition, each independent claim sets forth assigning system resources to the first class object. Dugan does not show or suggest a first class object. However, even assuming *arguendo* that the managed objects disclosed by Dugan could be considered first class objects, system resources are not assigned to them.

The Office Action, on page 3, lines 1-2, page 4, lines 1-2, and page 5, lines 6-7, suggests that Dugan anticipates these claim elements at col. 13, lines 45-61 of Dugan. Applicant respectfully disagrees. In that paragraph of Dugan, Dugan teaches that a Service Administration component of the communications networking system is responsible for,

among other things, ensuring that the managed objects are available for nodes via the Data Management Component. This is different from present claim elements requiring system resources be assigned to the first class object. Specifically, Dugan does not teach assigning resources to an object. Rather, it makes the objects available to the node. Since the managed objects disclosed by Dugan do not contain processes, it would not make sense to assign resources to them. Rather, Dugan makes the managed objects available to the nodes so that when a node receives a call event, it can process it according to the requirements defined in the managed object. This is explained clearly in the Abstract of Dugan, which states, inter alia:

A centralized administration system is provided that comprises a system for storing one or more reusable business objects that each encapsulate a distinct call-processing function, and any associated data required by the business object; a system for distributing selected business objects and associated data to selected nodes in the switching network based on pre-determined node configuration criteria; and, a system for activating the business objects in preparation for real-time use. A computing platform is provided within each node for executing those business objects required to perform a service in accordance with an event received at the network switch. Also within a node is a storage and retrieval system for sorting and retrieving selected objects and any associated data distributed by the administrative system, and making them locally available to the computing platform when required to perform a service.

Thus, since Dugan does not teach encapsulating a process in a compute capsule promoted to a first-class object, it does not teach assigning resource to the object. The managed objects (also referred to as business objects) disclosed by Dugan contain functions which are not processes, but simply code and data defining a telephone or communication service. Rather than having resources assigned to the managed objects, the managed objects are "made available" to the computing platform (resource). Applicant therefore respectfully submits that Dugan does not teach each and every limitation set forth by independent claims 1, 8, and 15 and therefore does not anticipate them. Furthermore, Applicant submits that dependent claims 2-6, 9-13, and 16-20 are also not anticipated for the same reasons as the independent claims upon which they depend. Reconsideration of the rejection is respectfully requested.

The dependent claims further define and distinguish the invention from the prior art. For example, claims 2, 9, and 13 relate to each first-class object being provided a guaranteed share of resources. The Office Action points to col. 11, lines 23-42 of Dugan as an


anticipating disclosure (the Office Action, page 3, lines 3-4; page 4, lines 3-4; and page 5 lines 8-10). Dugan does not mention "guaranteed share of resources" or any analog thereof. Dugan does teach that managed objects allows services and functions to be flexibly and dynamically distributed across the network based on any number of factors (col. 11, line 31-34). Again, the managed objects are not assigned resources, whether it be a guaranteed share or otherwise. Furthermore, no mention is made even of a guaranteed share of resources being provided to a service.

Remaining dependent claims similarly are not anticipated by Dugan. Applicant respectfully submits that they should be allowed for reasons independent of the independent and/or dependent claims from which they depend. Reconsideration of the rejection against the dependent claims is respectfully requested.

Applicant respectfully submits that the present application is now in condition for allowance. A Notice of Allowance is therefore respectfully requested.

If the Examiner has any questions concerning the present amendment, the Examiner is kindly requested to contact the undersigned at (408) 749-6900 X6933. If any other fees are due in connection with filing this amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805 (Order No. SUNMP586). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,
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